REMARKS/ARGUMENTS

Claims 1 and 4 are amended. Claims 1-7 and 10-13 remain pending for consideration.

Applicant submits herewith an Information Disclosure Statement, which makes of record, references cited in a Japanese patent application which corresponds to the present U.S. patent application. Applicant has included a copy of the Japanese Action and an English translation thereof.

The Examiner has indicated that claims 4 and 12-13 recite patentable subject matter and would be allowable if rewritten in independent form including all the limitations of the base claim and intervening claims. Applicant has corrected two clerical errors in objected to claim 4.

The Examiner has rejected claims 1-3, 5-7 and 10-11 under 35 U.S.C. §102(a) as being anticipated by Dragos (NPL Grant-Friendly Technology at Colorado State University, hereinafter "Dragos"). Applicant respectfully requests reconsideration of the rejection in view of the amendments and discussions set forth herein.

The present invention, as defined by independent claims 1 and 5, is an improved responsive load device that is responsive to stress levels on the grid to prevent power consumption from being increased when generation shortage grid stress level (low frequency) exceeds a first maximum threshold value and to prevent power consumption from being decreased when a demand shortage grid

stress level (high frequency) is below a minimum threshold value (page 6, lines 18-23).

The present invention builds on known responsive load devices (see top of page 10), in that, with prior art responsive load devices, when an appliance is providing response to the grid, and the air conditioning unit or heater is switched off in response to the grid frequency, the user could possibly notice the fact that the air conditioning unit, or heater was not cool or hot enough to react by altering the set point of the thermostat, so that the limits of the appliance are altered and it is switched on again. This would then mean that the economic benefit of the response is then lost, or even possibly made worse. The present invention therefore prevents this type of 'gaming' of responsive load devices and prevents the consumption of the device from being altered in a non-grid friendly manner.

The present invention deals with this problem by, when the grid is beyond certain minimum or maximum stress thresholds (i.e., there is too little or too much consumption), preventing the user from adjusting the set point of the device in such a way that the power consumption would be altered in a non-grid friendly manner (page 10, lines 18 onwards). This is now defined in the proposed amended claims attached herewith.

The Dragos publication describes a grid friendly technology for use specifically at the Colorado State University. The Dragos publication describes how appliances such as refrigerators can be fitted with a smart chip that could constantly monitor the fluctuations in the power grid and, when the grid is under

high stress, can switch the appliance off, in an attempt to stabilize the grid. The Dragos publication also describes how 'peak shaving' can be performed, wherein the devices are chosen to be switched off during periods of high power consumption.

The Dragos publication does not, however, describe a device that monitors the frequency of a grid and prevents a set-point from being adjusted in a non-grid friendly manner, based on a minimum and maximum grid stress thresholds. Accordingly, the claims are not anticipated by the Dragos publication.

It would also not be obvious to arrive at the present invention due to the teaching of Dragos. Dragos is completely silent regarding set points and does not even mention the relevance or importance of a set point at all. It would, therefore, not be obvious to modify the devices of disclosure in the Dragos publication so that set points of the devices are prevented from being adjusted in such a way that the grid is adversely affected. The claims are therefore patentable over the Dragos publication.

Japanese Utility Model Application Publication No. H05-27536 ("JP 536") also does not describe the claimed features of the present application. Reference is made to the English translation submitted with the accompanying Information Disclosure Statement. This document describes an air conditioning control system for use in a particular building that comprises a terminal unit and a high level unit. The higher level unit is used to keep track of the air conditioned

state of a plurality of individual spaces to be air conditioned in a building [004]. Terminal units WS are provided locally, and allow a user to input desired set values into the terminal unit.

Paragraph [0008] describes how "an acceptance range storage portion 12 stores an effective acceptance range of set values from a terminal 40". It is also described how "an environmental limit range 14 calculates or stores the effective range for the set values sent from the terminal unit 40 (such environmental conditions including suppression of air conditioning for the entire building according to scheduled starts and stops, permission of air conditioning only of those individual spaces for which a request for air conditioning was made in advance in accordance with overtime work regulations and the like". When a desired set value sent from the terminal 40 falls within the acceptance and environmental limit ranges, the set value is allowed, but when it falls outside the range, the request is canceled.

Therefore, although JP 536 describes that the higher level unit may sometimes process the desired input set value as being inoperative and not allow a requested change in set value, this is determined by the higher level unit based on these two ranges of set points, and not based on minimum and maximum thresholds of a grid stress level, as in the present claims of record. The claims are therefore not anticipated by JP 536.

It would also not be obvious to arrive at the present invention based on the teaching of JP 536 because there is no teaching in this document whatsoever

that the air conditioning system should be responsive to a grid and consequently, no teaching that a set point should be prevented from being adjusted in a non-grid friendly manner. Moreover, since JP 536 only ever teaches of preventing a set value from being changed based on ranges of such set values, it would not be obvious to modify this system so that the adjustment of a set value was based on a completely different feature not even acknowledged by the reference as being relevant, e.g., grid stress thresholds. The claims are therefore also patentable over JP 536.

For the foregoing reasons, it is respectfully submitted that all claims in the application as amended are in condition for allowance. Accordingly, favorable reconsideration of the application is respectfully solicited.

Respectfully Submitted,

David Hirst

By: _____

Guy D. Yale
Registration No. 29,125
Alix, Yale & Ristas, LLP
Attorney for Applicant

Date: November 6, 2009
750 Main Street, Suite 1400
Hartford, CT 06103-2721
(860) 527-9211
Our Ref: DHN/363/PC/US

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